

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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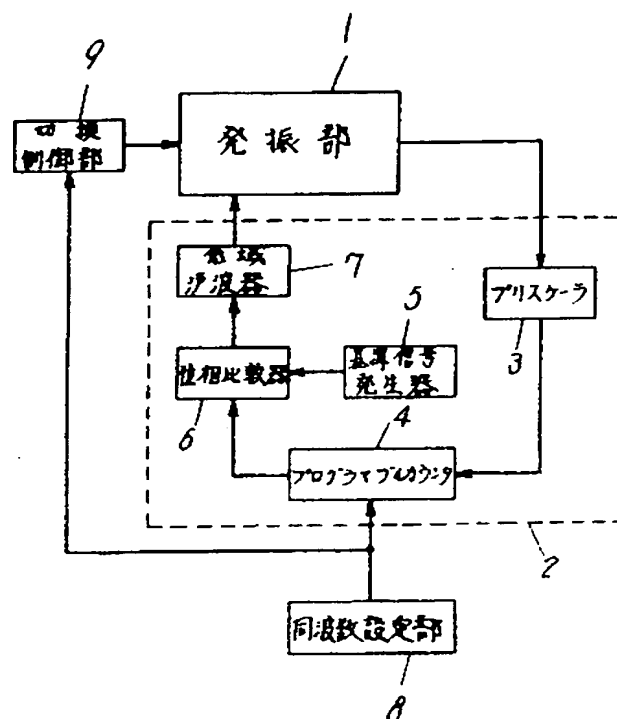
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APPLICATION NUMBER : 57132702

APPLICANT : MATSUSHITA ELECTRIC IND CO LTD;

INVENTOR : HASHIMOTO KOJI;

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TITLE : OSCILLATING DEVICE



ABSTRACT : PURPOSE: To extend the varying width of oscillating frequency and to improve the performance of an oscillator, by providing a simple addition circuit to the oscillating device using a single voltage variable capacitance element.

CONSTITUTION: An oscillated output of an oscillating section 1 including a variable tuner comprising a variable capacitor circuit and an inductor, and a feedback amplifier is inputted to a prescaler 3 in a PLL synthesizer section 2. Its frequency division output is inputted to a programmable counter 4, and further its variable frequency-division output is detected in phase at a phase comparator 6 with a reference signal of a reference signal generator 5, and the detected output is applied as a control voltage of the voltage variable capacitance element of the variable capacitor circuit of the oscillating section 1 via a low pass filter 7. A part of an output signal of a frequency setting section 8 controlling the frequency dividing ratio of the program counter 4 is applied as the control signal of a changeover switch of the variable capacitor circuit of the oscillating section 1 via a switching control section 9.

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